STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING
SUITE 700, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-0791

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

TO: Chuck Rychen
Assistant Chief Engineer of Operations

FROM: Brad Freeze, Director of Traffic Operations

SUBJECT: **Proprietary Item Request and Justification**
City of Johnson City

1) **Traffic Signal Controllers**
2) **Traffic Signal Network Switches**

1) **Traffic Signal Controllers:** The City of Johnson City is requesting that Siemens Eagle EPAC controllers be used in all signalization projects within the City over the next three years where Federal and/or State funding are used. The following are justification items for this request:

The City of Johnson City has an inventory of existing equipment is comprised primarily of the Siemens Eagle EPAC controllers, and, as noted below, you will see that our current solid state controllers used in the field are exclusively the EPAC controllers.

- 1 electromechanical controllers
- 96 EPAC controllers
- 10 spare EPAC controllers
- 2 spare TCT controllers

The EPAC controller is required to provide full synchronization and extended capabilities. The City of Johnson City staff has been extensively trained to install, operate, maintain, program, and troubleshoot Siemens Eagle EPAC controllers. This allows our technicians to quickly diagnose problems with field units which reduces the time required to maintain the system overall and helps keep the system operational during heavy traffic times to insure maximum capacity of the synchronized system. By utilizing the Siemens Eagle EPAC controller as the standard for the City, there will be a cost savings in stocking replacement equipment which will result in faster and less costly repair.

2) **Traffic Signal Network Switches:** The City of Johnson City is requesting that Siemens Ethernet network switches be used in all signalization projects including traffic surveillance cabinets within the City over the next three years where Federal and/or State funding are used. The following are justification items for this request:

The City of Johnson City has an inventory of existing equipment is comprised primarily of the Siemens Ethernet network switches, and, as noted below, you will see that our current solid state controllers used in the field are exclusively the EPAC controllers.

- 89 Siemens switches that can be DIN rail mounted or can be placed on the shelf
- 2 Siemens 19" rack mount hub switches
- 2 spare Siemens Ethernet switches
- 2 Kyland switches
- 2 spare Kyland switches

The Siemens Ethernet network switch is required to provide full synchronization and extended capabilities. The City of Johnson City staff has been extensively trained to install, program, and maintain Siemens Ethernet network switches. This allows our technicians to quickly diagnose problems with field units which reduces the time required to maintain the system overall and helps keep the system operational during heavy traffic times to insure maximum capacity of the synchronized system. By utilizing the Siemens Ethernet network switches as the standard for the City, there will be a cost savings in stocking replacement equipment which will result in faster and less costly repair.

I, Brad Freeze, Director of the Traffic Operations Division of the Tennessee Department of Transportation, do hereby certify that in accordance with the requirements of 23 CFR 635.411(a) (2) that the patented or proprietary items listed above are essential for the synchronization of existing facilities.

Assistant Chief Engineer of Operations

7.29.16
Date

Public Works Department

Engineering • Facilities
Solid Waste • Storm Water • Street • **Traffic**

May 18, 2016

Mr. Steve Bryan, P.E.
Traffic Operations Division, Traffic Engineer
Tennessee Department of Transportation
James K. Polk Bldg., 12th Floor
505 Deadrick Street
Nashville, TN 37243-0348

RE: Johnson City Signalization Components of Projects with Federal Funds:

Dear Mr. Bryan:

The City of Johnson City is requesting a certification to specify the Siemens Eagle EPAC traffic signal controllers to be used in the signalization component of projects within Johnson City's control and maintenance over the next 3 years using federal or state funds. We request the EPAC controller to provide full synchronization and extended capabilities.

Our inventory of existing equipment is comprised primarily of the Siemens Eagle EPAC controllers, and, as noted below, you will see that our current solid state controllers used in the field are exclusively the EPAC controllers.

- 1 electromechanical controllers
- 96 EPAC controllers
- 10 spare EPAC controllers
- 2 spare TCT controllers

Thank you for considering these requests to better serve the public with increased safety and efficiency through normal operations and maintenance activities. If you have any questions, feel free to contact me at 423-975-2733 or at anthonytodd@johnsoncitytn.org.

Sincerely,

Anthony D. Todd
Traffic Engineering Manager

209 Water Street • Johnson City, TN 37601 • 423 975-2732 • Fax: 423 975-2738

Public Works Department
Engineering • Facilities
Solid Waste • Storm Water • Street • **Traffic**

May 27, 2016

Mr. Steve Bryan, P.E.
Traffic Operations Division, Traffic Engineer
Tennessee Department of Transportation
James K. Polk Bldg., 12th Floor
505 Deadrick Street
Nashville, TN 37243-0348

RE: Johnson City Signalization Components of Projects with Federal Funds:

Dear Mr. Bryan:

The City of Johnson City is requesting a certification to specify the Siemens Ethernet switch to be used in the traffic signal and traffic surveillance cabinets for projects within Johnson City's control and maintenance over the next 3 years using federal or state funds. We request the Siemens switch to provide full compatibility and we already have knowledge of how to program and maintain this switch. The other switches we have are Kyland switches that require either a prewired card rack with an available slot or special cabinet modification to power the switch that is not available at many cabinets.

Our inventory of existing equipment is comprised primarily of the Siemens switch, as noted below. The other two switches are not yet connected to the TMC. All of the Siemens switches in use are connected to the TMC.

- 89 Siemens switches that can be DIN rail mounted or can be placed on the shelf
- 2 Siemens 19" rack mount hub switches
- 2 spare Siemens Ethernet switches
- 2 Kyland switches
- 2 spare Kyland switches

Thank you for considering this request to better serve the public with increased safety and efficiency through normal operations and maintenance activities. If you have any questions, feel free to contact me at 423-975-2733 or anthonytodd@johnsoncitytn.org.

Sincerely,

Anthony Todd
Traffic Engineering Manager